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INTERNATIONAL COOPERATION FOR THE ERADICATION OF POVERTY IN DEVELOPING COUNTRIES

Report by the Secretary-General

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I. INTRODUCTION

1. In the early 1990s, eradication of poverty has come to the forefront of international concerns. However, official public concern over the poor, as a population category manifestly unable to satisfy its basic human needs, has long been a feature of all societies. 1/ Beginning with the 1940s, international declarations on human rights have called not only for the mitigation of poverty but also for its eventual eradication. 2/ During the 1970s, basic-needs approaches to poverty reduction were proposed by the ILO and followed up on a large scale by World Bank lending to developing countries for those purposes.

2. After a spell, during which the international economic environment and domestic stabilization and adjustment measures took precedence over issues of social inequality and poverty, renewed emphasis was given to eradicating poverty. The issue was reincluded in the agenda for action by the international community, as evidenced by the consideration it received in the Declaration on International Economic Cooperation and Development, adopted in 1990 by the General Assembly at its eighteenth special session, 3/ the International Development Strategy (IDS) for the 1990s, 4/ the World Bank's World Development Report 1990: Poverty, 5/ and the UNDP's 1990 and 1991 issues of the Human Development Report. 6/ At its 1991 spring meeting, the Development Committee - Joint Ministerial Committee of the Boards of Governors of the Bank and the Fund - included poverty in its agenda for consideration at its next meeting in the autumn of 1991.

3. At the regional level, the then President of Colombia took the lead in Latin America in stressing the importance of eradicating poverty in the region, and was instrumental in convoking the First Regional Conference on Poverty, held at Cartagena, Colombia, in 1988. The Cartagena Conference, moreover, was followed by the Second Regional Conference on Poverty, held at Quito, Ecuador, in 1990. The issue of poverty alleviation has also been reflected in the work of the other regional commissions, in particular in an expert meeting and an associated series of national monographs on alleviating rural poverty, published by the Economic and Social Commission for Western Asia (ESCWA) in the mid-1980s. 7/

4. The problem of poverty in relation to structural adjustment programmes also received growing international attention in the 1980s, first through UNICEF's seminal publication, entitled Adjustment with a Human Face, 8/ and subsequently through a series of data-gathering and analytical exercises, under the so-called Social Dimensions of Adjustment project, which are being carried out by the World Bank and UNDP in cooperation with a number of sub-Saharan African countries. The various facets of adjustment and poverty have also been examined in many of the reports issued by the agencies, departments and offices of the United Nations system, some of which are cited at the end of this report.

5. The present report was prepared in response to Assembly resolution 44/212, entitled "International cooperation for the eradication of poverty in developing countries" and adopted on 22 December 1989 at the forty-fourth session of the General Assembly. In that resolution, the Assembly requested the Secretary-General to prepare a comprehensive report (a) analysing the impact of international economic conditions on poverty in developing countries; (b) summarizing national experiences in attempting to eradicate poverty; and (c) proposing effective international policy measures for the urgent and permanent eradication of poverty. The report also responds, in part V, to the request, contained in resolution 44/211 of 22 December 1989, entitled "Comprehensive triennial policy review of operational activities for development of the United Nations system", for an analysis of the role that operational activities for development may play in efforts to eradicate poverty.

II. GENERAL CAUSES, NATURE AND INCIDENCE OF POVERTY

6. There is no precise and consistent definition of poverty but the term, as applied to developing countries, has generally had an inescapable connotation of physical want. Those described as "poor" are persons and families who are obliged to struggle continuously in order to save themselves and their dependants from hunger and assure themselves access to other fundamental human needs. Among such groups are smaller numbers of the extreme and more vulnerable poor who have temporarily or for ever lost the battle, thus sinking into dire want and destitution.

A. Changes affecting the poor

7. Poverty as a state of mankind has at all times existed, although the perception of it and some of its structural and conjunctural aspects have changed in recent history as a result of modernizing forces and development. In pre-modern times, economic differentiation was generally less pronounced, and the structural poor were mainly those who lacked access to, or ownership of, land, labour, livestock, or other basic forms of capital and security. As in modern times, the conjunctural poor included those rendered poor, if not destitute, by devastating wars and droughts, or by personal misfortune.

8. Like other population groups, the poor have at all times had to cope with changing conditions and the new challenges and opportunities they pose. From time immemorial, there have been subsistence crises, clashes with other societies, and natural disasters. With time and population growth, however, greater differentiation between the poor and non-poor arose in regions where land pressures led to the exclusion of large numbers of people, for the most part the underprivileged of the time. The ranks of the disadvantaged included ethnic groups that were defeated in wars, immigrants and refugees from poorer and more socially unstable neighbouring areas, and others. Poverty became virtually hereditary in places where a legacy of stigma remained, long after legal measures were enacted to abolish various forms of bondage, caste systems, racism, ethnic or other forms of discrimination.

9. For many developing countries, the pace of change quickened with colonial rule and its aftermath. During this period, most already existing forms of poverty were preserved while at the same time new ones were introduced. In some cases, the most desirable lands were alienated to European settlers. In parts of Africa and Asia, new national urban élites came into existence. Indigenous rural populations and their traditional forms of organization and production became increasingly marginalized. Rural ethnic groups with a language, professed religion, and culture alien to the predominant ones became disadvantaged and discriminated against. The combination of illiteracy and a primary spoken language other than the nationally dominant one severely limited their mobility and access to labour markets, thus confining them often to backward, remote and marginal territorial areas. When forced by drought or local conflicts to flee such areas temporarily or permanently, many were subjected to exploitation in unfamiliar, sometimes hostile new surroundings. For them, changes wrought by modernization brought social transformation, often for the worse.

10. Some disadvantaged groups perpetuated or worsened their conditions by seeking to preserve their cultural autonomy and traditional ways of life in the face of modern changes. Indigenous groups accustomed to a traditional life of hunting, fishing, and small-scale, slash-burn farming, for example, were rendered indigent, and their cultures destroyed, when lands were taken from them and the property rights given to others. Nomadic herdsmen and peasants practising communal agriculture were often plunged into extreme poverty, hunger and landlessness when communal lands were converted to individual forms of ownership.

11. The effects of modernization and development, however, were generally positive for those poor who were more open to change and better able to adapt. 9/ That has particularly been true of countries where economic growth was vigorous and the structure of the economy not over-polarized. The opportunities for the more enterprising and progressive poor to increase their incomes and assets multiplied as a result of the partial conversion of national economies to new modes of production, the expansion of markets, the advent of modern forms of transport, improved access to basic schooling, and the gathering momentum of urbanization. With advances in preventative and curative health care, moreover, the quality of life of many of the poor improved. Infant mortality declined and life expectancy increased at rates that outpaced the improvements in incomes and consumption.

12. Both the traditional and progressive poor benefited from development and modernization in terms of the reduced risk of famine mortality. In sub-Saharan Africa, that achievement was made possible by more effective mobilization and transport of food from surplus to deficit areas, by breaking the link between food shortages and mortality through improvements in medicine and sanitation, by expanded international relief operations, and - as discussed in part IV - in some cases the adoption of emergency employment programmes during times of drought. 10/ In Asia, famine mortality disappeared in the 1970s as a result of these factors and, equally important, of the adoption of high-yielding hybrid varieties of wheat, dwarf varieties of rice,

and other components of technologies and institutional development forming part of the "green revolution". The continuing rapid growth of population and its encroachment on ecologically fragile lands, however, raise questions as to how much longer Malthusian predictions can be put off in the future.

13. Thus, despite the continued but gradually shrinking presence of marginalized pockets of traditional poverty, in the aggregate chronic poverty and early mortality declined in most developing countries as a result of the provision of human development services by Governments and the opportunities made available to the poor by urbanization and trickle-down economic growth. On the other hand, the forces of modernization and change that created new opportunities for many of the poor to improve their circumstances also introduced new forms of insecurity for many of them. Although the risk of destitution and starvation from famine declined, new kinds of conjunctural poverty emerged in response to the advent of the cash economy, technological change, and economic fluctuations emanating from world markets. For instance, stable share-cropping arrangements with landlords were abandoned and tenants evicted and converted into seasonal, landless agricultural labourers in parts of Asia and Latin America as a result of technological changes in agriculture. In many countries, migrant workers on cash-crop farms were dismissed during downswings in the trade cycle, and rehired during upswings. In urban areas, craftsmen were impoverished on at least a temporary basis when displaced by the mass-production of consumer goods. The erosion of traditional forms of mutual support, as discussed further on, contributed to the increase of conjunctural poverty in the urban and rural areas of most developing countries. In sum, whereas chronic poverty declined with modernization and change, conjunctural poverty grew and poverty in general became more heterogeneous.

14. With the changes resulting from modernization and development, the state of poverty also came to be perceived differently. Because of growing access to formal education, awareness of the high living styles of national élites, and exposure through the media to rival social models and aspirations, the poor became more sensitized to, and resentful of their disadvantaged circumstances and relative deprivation. The historical tendency to endure poverty and take it largely for granted yielded to new stirrings and yearnings, as well as feelings of pent-up anger, envy and frustration. Dissatisfied with rural life, many sought to leave the land with the hope, for example, of becoming clerks in government offices. It only made matters worse that the more advantaged members of society held manual and rural work in contempt, and that they considered the urban poor and their uncontrolled and self-built settlements a blight on the cities.

15. The State, as the principal institutional link between external dependency in the world and internal domination, and particularly through its role in resources allocation and the control of social conflicts, has been in a position to exert a major influence on the well-being of the poor. In countries where Governments made serious efforts to alleviate poverty, the poor came to view the State as a benign source of services and an arbiter of social conduct and justice. The disadvantaged in such cases have not

hesitated to exert pressures on the State to relieve their situation. In other countries, however, poverty groups have had less access than other strata of society to power and influence. Moreover, they have had insufficient resources and have been too vulnerable to reprisals to take active part in protests and agitations. They have also typically been too heterogeneous in everything except their poverty, and in rural areas have been too submerged at the bottom of local power structures to be able to unite to improve their lot. At most, poor people in such circumstances have joined coalitions supported by the local non-poor or outside groups, such as teachers' unions, in order to obtain irrigation, schooling, and other facilities. 11/

B. Adaptive responses of the poor

16. Changes in the nature of poverty over time have not been due only to exogenous factors. The responses of the more enterprising and progressive poor to the changes around them have been equally important, as evidenced by the adaptive patterns of behaviour manifested by households, extended families and local communities at the micro level.

17. The extended family has historically been the most important institution available to the poor for coping with adversity. In particular, the solidarity of lineal family ties and obligations has traditionally constituted the first line of defence against indigence and destitution. However, with modernization and development, kinship ties have changed everywhere, and in some cases have either vanished or been modified beyond recognition.

18. Lineal family ties have proved especially resilient in African countries, where they have been adapted to help family members make ends meet despite long and distant separations resulting from emigration of some members to urban areas, and even abroad, for education or, more commonly, wage work. Support strategies, in such instances, include remittances from urban members by way of helping rural kin to purchase agricultural inputs and pay local primary-schooling fees; remittances of staple foods from rural areas to mitigate the impact of rising food prices on urban households; the fostering of town-born children by rural relatives to free the parents for work; the sending of a child back to a village to assist a family member in household chores during his or her old age; accommodating young rural-migrant relatives in urban areas in exchange for their labour in family-generated jobs in the informal sector; and so on. 12/ Urban life, however, has eroded some of those values, as new conjugal or consensual relations are entered into and as the young become increasingly difficult to watch over and control. Because of the erosion of urban family ties, moreover, the interaction between extended-family support care and institutional facilities has become very intricate, with institutional orphanages and homes for the elderly, although few in number, usually crowded despite local perceptions of such homes as alien to traditional values and equivalent to a moral failure.

19. In North Africa, the Near East, most of Asia, and the Caribbean, extended family ties became in time less important than in sub-Saharan Africa but remained more resilient and vital to family security than in the middle-income, highly urbanized countries of Latin America. In the large urban areas of Latin America, in particular, the ties of many of the urban poor to their rural places of origin eventually became in many cases little more than a bitter-sweet memory. The main exceptions are to be found in the personal histories of recent migrants and rural-to-urban migrants in the smaller, less developed, and predominantly rural countries of the region.

20. The fraying or disappearance of kinship ties has not always led to their replacement by strong nuclear family bonds. Indeed, many urban family nuclei among the poor appear to be frequently on the brink of dissolution, as evidenced in much of Latin America by the prevalence of urban street gangs composed of vagrant and largely abandoned children. The breakdowns of nuclear households has also had disastrous implications for abandoned women, handicapped dependants and elderly members unable to look after and support themselves.

21. Village ties in most areas have also been affected by modernization and development, in some cases dramatically, in others barely visibly. In those instances where community solidarity has been maintained largely intact, it has often been at the cost of rigidity, isolation, and resistance to innovation and change. Rural areas, however, have in various ways and at different rates been penetrated by market forces, mass communications, and political appeals of urban origin or from abroad. As a consequence, systems of mutual obligation, shared resources and security arrangements have gradually yielded to ideals that encourage individualism, upward mobility, and increased material differentiation and inequality. To the extent that nuclear family ties were eroded, women more than men have suffered in cases where asset-control structures and male-enforced customs remained dominant. The partial abandonment of collective, non-individualist behaviour has also led to environmental neglect and ecological degradation. 13/

22. Whether individually, as nuclear families, or with the support of kin ties, poor people have generally been alert, enterprising and unrelenting in their efforts to safeguard their assets and improve their lot. 14/ To avoid destitution, for example, most have gone hungry during times of drought rather than consume their seeds or livestock, which would be to sacrifice the basis of their long-term survival. Large numbers of the poor have defied local powers and authorities by squatting on rural or urban lands where they have erected makeshift, unauthorized dwellings, planted crops, or started up small enterprises in contravention of local property rights, licensing requirements, zoning regulations, and building standards. Small enterprises established by the poor have often been created in the interstices resulting from regulations in the urban economy, where the competitive advantage of informal sector entrepreneurs has been their ability to evade the rigidities created by regulations which raise costs excessively for formally established enterprises. Black markets, smuggling and other hidden activities have also created many opportunities for the poor to improve their incomes in countries riddled with economic and institutional distortions.

23. At the top of the list of many poor people's efforts to improve their conditions has been the option of urban migration. Generally, the poor have resorted to urban migration in the pursuit of higher pay and better schooling and health care, or because of their lack of access to rural land, the devastation created by natural disasters such as drought or floods, the disruptions and threats resulting from warfare in rural areas, or individual factors such as the wish to escape exploitative labour arrangements based on systems of entrapment linked to debts that the poor or their forebears incurred. In much of Africa, moreover, rural-to-urban migration has formed part of extended families' manifold survival strategies. In such instances, the rural poor have sought simultaneously to reduce the possibility of physical deprivation and improve their economic prospects by intercropping their lands to cope with seasonal and climatic fluctuations, while at the same time placing various members of their households in different labour markets in order to strengthen and diversify their income and remittance sources. While rural-to-urban migration has helped to reduce extreme poverty in many countries, it has also ended up shifting much of the incidence of poverty to the cities.

C. Incidence of poverty

24. Despite problems of measurement, incomes and consumption expenditures are the criteria most commonly used for distinguishing between the extremely poor, the poor, and the non-poor. The main difference between the first two groups is that, for the extremely poor, nutritional needs outweigh all other considerations, whereas the poor have a low and deprived consumption level relative to general societal norms, but none the less have sufficient incomes to purchase a consumption basket deemed adequate to sustain a minimum level of living. As a group, moreover, the extremely poor are disproportionately comprised of underfed children and adults who have limited physical and educational assets and who live predominantly in rural areas. Being landless or near-landless, they are highly prone to unemployment, disguised or not, and are particularly vulnerable to seasonal variations in caloric adequacy. Furthermore, the extremely poor tend to have large numbers of children as a form of social insurance, although eventual family size is restrained by illness and mortality associated with severe anthropometric shortfalls. 15/

25. Over 1,100 million people in the world are estimated to live in poverty, of whom over 600 million are deemed extremely poor. 16/ Of those 600 million, two thirds live in Asia, where they are concentrated in rural areas with high population densities, such as the Gangetic plain of India, the delta region of Bangladesh, and the island of Java in Indonesia. In sub-Saharan Africa, 120 million people are estimated to be extremely poor. As in Asia, extreme poverty in sub-Saharan Africa is largely a rural phenomenon, and concentrated in areas where soils are poor and farming techniques underdeveloped. The incidence of extreme poverty is smaller in other developing regions. In Latin America, extreme poverty encompasses 50 million and is concentrated in the Andean highlands, sizeable urban slum and squatter areas, and among rural households made landless more as a result of inequalities in landholding than

population pressures. In North Africa and the Near East, the extremely poor amount to 40 million and, for the most part, are dispersed in smaller, less visible pockets of poverty in rural and urban areas.

26. After the Second World War, poverty in the developing countries declined as a share of total population but, because of rapid population growth, it increased in absolute numerical terms. 17/ The rate of improvement in the share of population in poverty differed markedly between countries, and within countries between rural and urban populations. Generally, the urban bias embedded in most countries' development policies has produced a gap between urban and rural populations that continues to disadvantage the rural poor in terms of incomes, availability of consumer goods, and access to basic public services and other transfers. As for regional rates of poverty reduction, experiences have also varied. In sub-Saharan Africa, the real incomes and consumption of the poor is no higher than it was 25 years ago. In Latin America, the extremely poor gained little from rapid economic growth during the 1960s and 1970s; poverty declined in the region but less than would have occurred if relative inequality had not also increased during those years. In parts of Asia, the pace of decline in the incidence of poverty was too slow to counteract the demographic growth of the numbers of extremely poor.

III. IMPACT OF THE INTERNATIONAL ECONOMIC ENVIRONMENT ON POVERTY DURING THE 1980s

27. The record of poverty reduction during the 1980s was mixed. At the level of the world economy, the salient features were a general slow-down in global economic growth, widening disparities in economic performance among developing countries, an increase in international economic instability, and a reversal of net financial resource flows between developed and developing countries. Africa and Latin America were negatively affected by shifts in the economic environment, and their poverty rates increased both absolutely and as a share of total population. As seen in table 1, most countries in those two continents experienced considerable declines in their per capita incomes. The share of poverty in total population, although not the absolute numbers of the poor, fell in Asia as a consequence principally of improvements in India and Pakistan, China's adoption of major economic reforms, Indonesia's shift to basic needs and pro-rural development policies, and the rapid economic growth of the Republic of Korea, Malaysia, Singapore, and Thailand, among others.

28. In the early 1990s, new international shocks were felt as a consequence of the Gulf War and the burgeoning problem of servicing foreign debts for some Asian countries that had gone through the 1980s largely unscathed. Although it is too early to gauge the full impact and ramifications of those shocks, the effects of the Gulf War and its aftermath on many of the immigrant workers of the region clearly had significant repercussions both for the workers concerned and for their countries of origin.

TABLE 1. CHANGE IN REAL PER CAPITA INCOME, 1980-1990 a/

Decline				Increase			
More than 35%	20-35%	10-20%	Less than 10%	Less than 10%	10-20%	20-35%	More than 35%
			Net energy importers				
Côte d'Ivoire	Argentina	Benin	Brazil	Bangladesh	Morocco	India	Botswana
Liberia	Chad	Central African Republic	Burkina Faso	Burundi	Nepal	Pakistan	China
Mozambique	El Salvador	Ethiopia	Comoros	Chile	Seychelles	Sri Lanka	Cyprus
Nicaragua	Equatorial Guinea	Ghana	Costa Rica	Colombia		Turkey	Hong Kong
Sao Tome and Principe	Guatemala	Mauritania	Dominican Republic	Israel			Malta
	Haiti	Panama	Kenya	Mali			Mauritius
	Honduras	Rwanda	Lesotho	Paraguay			Republic of Korea
	Madagascar	Somalia	Malawi				Singapore
	Niger	Uganda	Philippines				Thailand
	Sierra Leone	Yugoslavia	Senegal				
	Sudan	Zaire	Swaziland				
	Togo		Uruguay				
	United Republic of Tanzania		Zimbabwe				
	Zambia						
			Net energy exporters				
Gabon	Bolivia	Algeria	Cameroon	Egypt	Malaysia	Indonesia	
Iraq	Iran (Islamic Republic of)	Angola		Tunisia	Oman		
Kuwait	Peru	Congo					
Libyan Arab Jamahiriya	Syrian Arab Republic	Ecuador					
Nigeria	Venezuela	Mexico					
Qatar							
Saudi Arabia							
United Arab Emirates							
Memo item:							
Number of countries							
13	19	16	14	9	5	5	9
Percentage of population:							
4.5	6.8	7.8	7.7	6.3	1.6	31.9	33.5

Source: Department of International Economic and Social Affairs of the United Nations Secretariat, based on data of UNSO, ECA, ECLAC, ESCAP, IMF, UNCTAD, the World Bank and the African Development Bank.

a/ Real per capita income corresponds to per capita GDP in constant 1980 dollar prices adjusted for changes in terms of trade and net factor payments. The sample consists of 90 developing countries for which data are available. Those represent 94.3 per cent of the total population of 3,677 million in developing countries in 1985.

A. Effects of external shocks in Africa and Latin America

29. Drawing on available information for the 1980s, this part of the report is focused on the external shocks of the past decade, and particularly on the regions most severely affected by those shocks: sub-Saharan Africa and Latin America. Those shocks consisted of a sharp decline in commodity prices leading to a serious deterioration in the terms of trade of many countries of the two regions, an abrupt and large drop in capital inflows into many of those countries, and a sharp rise in real interest rates. For many countries, the shocks added up to a large loss of real income and unprecedented outflows of financial resources, which resulted in a severe curtailment of imports, investment and growth. For sub-Saharan Africa, which lacks a diversified economic base and exports mainly primary commodities, the worst shock was the sharp decline in terms of trade. The shift in Latin America's terms of trade was somewhat less pronounced than in sub-Saharan Africa. The major shocks, instead, were a sharp decline in capital inflows and high international interest rates.

30. As shown in table 2, in the 1980s per capita output declined by 12 per cent in Africa and 11 per cent in Latin America. With changes in terms of trade and net factor payments taken into account, the fall in income was even larger: a 22 per cent decline in real incomes in Africa and 16 per cent in Latin America.

31. These shocks had strong indirect effects on poverty in Latin America. According to the Economic Commission for Latin America and the Caribbean (ECLAC) calculations, the incomes of the poor in that region, and especially of the extremely poor, fell proportionally even more than per capita incomes during the 1980s. 18/ In the sample of countries shown in table 3, the share of the poor in total population increased on average by one fifth, and of the extremely poor by one fourth. Those increases were concentrated mainly in the urban areas, where the share of the poor rose by one third, and of the extremely poor by almost one half. In the rural areas, the share of the poor was almost unchanged, whereas that of the extremely poor increased by one sixth.

TABLE 2. GROWTH OF OUTPUT AND PER CAPITA INCOME, 1980-1990

	(1980 = 100)			
	Per capita gross domestic product		Per capita income a/	
	1980	1990	1980	1990
Africa	100	88	100	78
Latin America	100	89	100	84
West Asia	100	67	100	51
South and East Asia b/	100	164	100	162
Developing countries	100	112	100	106
(excluding China)	(100)	(97)	(100)	(91)

Source: Department of International Economic and Social Affairs of the United Nations Secretariat.

a/ Per capita GDP adjusted for changes in terms of trade and net factor payments.

b/ Includes China.

TABLE 3. POOR AND EXTREME POOR IN SEVEN LATIN AMERICAN COUNTRIES

Country/Year	Percentage of poor in total population			Percentage of extreme poor in total population		
	Urban	Rural	Total	Urban	Rural	Total
Argentina						
1980	9	10	10	2	5	3
1986	15	20	16	4	7	5
Brazil						
1980	34	68	45	12	43	22
1986	38	66	45	16	41	23
Colombia						
1980	40	48	42	15	24	17
1986	40	45	42	17	23	19
Costa Rica						
1980	18	28	24	6	8	7
1986	24	30	27	7	12	9
Peru						
1980	38	80	53	12	48	25
1986	52	72	60	19	46	30
Uruguay						
1980	13	27	15	3	9	4
1986	19	29	20	4	12	5
Venezuela						
1980	20	43	25	6	19	9
1986	30	42	32	9	18	11

Source: Statistics and Projections Division, ECLAC, in "Magnitud de la pobreza en América Latina en los años ochenta", LC/L.533.

32. The growth of poverty in Latin America during the 1980s can be attributed mainly to the spread effects of shrinking economic activity and declines in domestic expenditures resulting from the changed international economic environment. A severe compression in imports to the region was caused by the obligation to service external debts in the face of depressed commodity markets and sharply reduced inflows of capital. Because the productive structure of the region is highly dependent on imported intermediate inputs, the immediate impact of import compression was a drop in economic activity,

consumption and employment. Fiscal difficulties arose from the fall in revenues from export taxes and import tariffs, as well as from the political difficulties of raising direct taxes in a time of economic recession. Governments found it necessary to resort to other ways of financing the growing claims on budgetary resources of external debt-servicing. They typically increased internal public borrowing, which raised interest rates and crowded out private investment; augmented and broadened excise taxes of a generally regressive nature; produced inflation by monetary emissions; and reduced public expenditures, including social expenditures of benefit to the poor. Thus, apart from a few countries' emergency work programmes and nutritional schemes for vulnerable groups described in part IV, domestic policies in Latin America generally did little to mitigate the impact of the shocks on the extremely poor.

33. The brunt of absorbing Latin America's external shocks fell mainly on the urban labour force. 19/ During 1983-1984, when imports by the region were reduced by 40 per cent, firms in Latin America laid off many workers, which contributed directly to the rise in unemployment and poverty during the first years of the crisis. By the end of the decade, there was little sign that firms had restored previous job levels, even though most had managed to regain the plant capacity utilization levels of the pre-crisis years. 20/ Moreover, between 50 and 70 per cent of unskilled and semi-skilled jobs in the construction industry were lost in some countries due to cut-backs in public and private sector investments. 21/ In both the formal urban private sector and, even more, the public sector, real wages fell substantially during the 1980s. Between 1980 and 1987, earnings per worker in Latin America declined by 15 per cent in the private sector and by 32 per cent in the public sector domain. 22/ In view of the sharp increase in lay-offs, falling real wages, and lack of new job-creation in the formal sector, labour absorption in the urban informal sector of the region is estimated by ILO to have risen by 56 per cent during 1980-1987 and earnings per worker to have correspondingly fallen by 41 per cent. 23/ In other words, the largest fall in incomes in Latin America occurred in that sector of the labour force where most of the urban extremely poor and their dependants are concentrated.

34. Despite considerable increases in aggregate agricultural production, the incomes of the rural poor declined in Latin America. This decline was particularly pronounced among the largest rural category of the extremely poor, the landless labourers. Between 1980 and 1987, their wages fell by 23 per cent. 24/ The reason for this fall was the rapid growth that took place in the rural labour reserve as a result of the diminished prospects of emigrants finding work in urban areas, the labour-saving effects of the agricultural mechanization taking place in the production of commodities for export, and the impact of lower international commodity prices in driving out less efficient producers who had traditionally hired workers to assist them during periods of peak activity. In adjusting to the scarcity of regular work in both urban and rural areas, some 12 million landless labourers moved to towns which they have used as a base for schooling their children and for undertaking seasonal and temporary work in town and in the agricultural sector. 25/ As a result, those settlements grew more rapidly than capital cities in parts of Latin America during the past decade.

35. The effects of the external shocks on the Latin American peasantry, mainly poor subsistence farmers, were mixed. As in the case of the landless rural poor, economic recession in the cities had the effect of slowing down the exodus of peasants from rural areas. Moreover, rising inflation hurt poor producers without stocks who obtain the bulk of their annual income at harvest time and hold their assets in cash form between payments to facilitate consumption. 26/ Unlike the landless poor, however, the subsistence production of small farmers helped to cushion them from the negative spread effects of the external economic crisis. Moreover, in cases where external indebtedness led to declining food imports, the way was often opened for small producers to capture a share of the market and supply part of the expanding domestic agro-industrial food system, as further discussed in part IV. 27/

36. In Africa, as in Latin America, the external shocks from deteriorating terms of trade had a depressing impact on incomes in the urban areas. Average labour earnings in the urban public sector of Africa declined by 30 per cent during the first half of the 1980s, and the number of workers employed by the formal private sector fell by 16 per cent during those years. 28/ On the other hand, because many countries adopted foreign-exchange and producer-price policies that reduced earlier distortions and generally improved the domestic terms of trade for rural areas, the burden of falling world commodity prices was felt less by rural population groups, and more by urban groups, than would have otherwise been the case. Moreover, many of the rural poor were able to retreat into subsistence agriculture as a buffer against the economic crisis. On the whole, therefore, rural incomes stagnated while urban incomes fell. 29/ One consequence of this shift in relative incomes was that out-migration from rural areas declined and some degree of reverse migration occurred. In Nigeria, for example, a 24 per cent increase in the rural labour force took place in the mid-1980s, as a result of retrenched urban workers returning to the farms of their kin, and because out-migration declined as word about the lack of work opportunities spread throughout rural communities. 30a/

37. In discussing the impact of international economic shocks on the sub-Saharan poor, several qualifying observations need to be made. First of all, the difficulties of the 1980s aggravated, but did not create, the region's fundamental problems of economic stagnation, inability to expand food production, poverty and lack of resources. These problems had already become apparent during the 1970s, and were arguably as much a result of ineffective domestic policies as of external events. Secondly, in the rural areas of much of the region, the problems created by economic shocks were secondary in importance to the local shocks emanating from the drought of 1983-1985 and, in some countries, from prolonged armed conflicts between ethnic groups. Those climatic and indigenous, man-made shocks were the factors primarily responsible for rendering many of the rural poor destitute, converting large numbers of families into refugees, and threatening much of the population with famine mortality. Rural violence in particular was able to create almost instant conditions of famine by suddenly uprooting people and preventing them from seeking alternative subsistence. Thirdly, given the traditional ties and sense of mutual obligation binding extended families together, too much of a

distinction should not be made between urban and rural incomes. In view of the reduced flow of monetary remittances from urban areas and increased incidence of in-kind remittances of staple foods from rural areas, it is in fact likely that purchasing power among the urban poor did not fall much more than in rural areas.

38. Apart from the impact of the economic shocks on the earnings of the poor in Africa and Latin America, the fiscal changes resorted to had a bearing on the consumption of the poor. They included rapid increases in the prices of basic goods that the poor consume, such as food and kerosene, and in public transport fares; heavier fees and charges for education and health care; and raises in indirect taxes. Because of the heterogeneity of the poor and the different mixes of fiscal changes that Governments adopted, it is difficult to generalize about the net effects on poverty. However, rapid increases in the real prices of wage goods occurred, particularly as concerns basic staple foods, following currency devaluations, subsidy reductions, and measures leading to higher producer prices for food. Real food prices also climbed as a consequence of hoarding and speculative practices that were often triggered by rising inflation which the financing of budget deficits by monetary expansion helped to stimulate. In some African countries, food prices rose mainly as a result of scarcities due to drought and warfare; in some cases, food imports cushioned those shocks. In general, higher prices affected the caloric intake of those poor who were not self-sufficient in food production, mainly urban households and the rural landless poor. As opposed to the improvements in other developing regions, the absolute numbers of undernourished persons rose in Latin America from 35 million to 37 million, and in sub-Saharan Africa from 78 million to 105 million between 1980 and 1985. 30b/

B. Fall in government social expenditures

39. Changes in government expenditures followed a broadly similar pattern in sub-Saharan Africa and Latin America during the past decade. 31/ An examination of regional averages suggests that, since real per capita GDP fell in both regions and the share of government in GDP remained relatively constant during the decade, absolute declines in public expenditures occurred in all functional areas except interest payments on the public debt. Capital investment and military expenditures declined as a share of total expenditure, the latter to a lesser degree; interest payments surged; general administration remained unchanged; and social services fell to a moderate extent, with most of the reduction taking place in the health sector. As for the intrasectoral allocation of social resources, primary and tertiary education were typically protected at the expense of secondary education, whereas allocative reductions in primary health care were in many instances offset by the large-scale adoption of immunization campaigns, oral rehydration therapy, and other cost-effective, technology-based interventions. While variations among countries and years were substantial, real per capita government spending in health and education fell markedly in sub-Saharan Africa and Latin America during that part of the 1980s for which data are

sufficiently available. At the same time, given that the fall in social expenditures paralleled that of GDP, it would seem that it was a general lack of resources rather than diminished governmental priority for health and education that caused those declines in the social sectors.

40. Close examination of the changes that occurred in real expenditures in the social sectors between 1980 and 1987 shows that the already low levels of real expenditure per student in primary education in sub-Saharan African countries fell by 15 per cent, the same as for health care. In Latin America, where social expenditures per capita are roughly five to seven times greater than in sub-Saharan Africa, real per capita expenditures declined by 10 per cent in education and 16 per cent in health. 32/

41. Paradoxically, social indicators during that period, as shown in table 4, generally continued to show improvements in social conditions and levels of living, although the rate of progress slowed in relation to previous decades. Table 4 indicates that, apart from calorie intake levels in Africa which stagnated during the first half of the 1980s, there was no significant falling-off from trend in social indicators during the 1980s.

42. There are various possible reasons for the apparent paradox. First of all, while some social indicators are based on direct observations, others such as life expectancy at birth are projected and interpolated on assumptions that do not reflect short-term changes. Secondly, shifts in social conditions lag considerably behind modifications in the inputs affecting them. Thus, health-related inputs of the 1970s, such as immunization, mothers' education in basic hygiene and the supply of piped drinking water, are likely to have had long-lasting beneficial effects requiring little continuing governmental maintenance and support. Eventually, however, health conditions will erode, as suggested by the recent outbreak and spread of cholera in parts of Latin America and sub-Saharan Africa. Technological changes also help to explain the continued improvement in some indicators. For example, inexpensive methods such as vaccines and oral rehydration have perpetuated the child survival revolution despite economic reversals and the budgetary problems faced by health-care programmes. Moreover, the poor have since time immemorial proved themselves flexible in adapting to new conditions. For instance, where cut-backs in government spending on rural schools and other basic services became alarmingly excessive, many of the landless poor migrated and resettled in towns where the services were still adequate. Similarly, when faced with the need to adjust to falling household budgets and rising food costs, many of the urban poor were able to reduce their expenditures on food and maintain a minimally essential caloric intake level by switching to inferior, less desirable staples. Finally, innovations made in public programmes to improve channelling benefits to the poor have in part compensated for the reduced levels of spending on public services.

TABLE 4. TRENDS IN POVERTY-SENSITIVE SOCIAL INDICATORS, 1970-1990

(Unweighted average of national data)

Regions	1970	1980	1985	1987	1988	1989	1990
	Indicators						
	Infant mortality rate (deaths per thousand live births)						
Africa	145.6	123.4	113.6	111.5	108.0	106.4	101.8
Asia	96.0	70.8	60.8	59.2	56.9	54.3	52.6
Latin America	83.5	61.7	53.0	49.9	50.0	47.6	46.1
	Under-5 mortality rate (deaths per thousand live births)						
Africa	239.4	204.8	189.4	184.1	178.3	175.2	
Asia	142.5	104.2	89.4	87.9	84.9	80.2	
Latin America	119.2	85.7	75.3	71.9	71.4	67.3	
	Life expectancy at birth						
Africa	44.1	48.1	50.2	51.9	51.4	52.2	52.4
Asia	55.1	60.3	62.4	64.1	63.5	64.2	64.5
Latin America	59.9	63.8	65.7	67.2	67.0	67.0	67.3
	Literacy rate a/						
Africa	26.6	34.3	44.4				46.2
Asia	43.2	55.6	59.3				63.7
Latin America	71.6	78.1	81.7				84.0
	Net school enrolment b/						
Africa	48.6	55.0	57.2	59.3	64.0		
Asia	67.5	81.8	79.0	89.1	89.8		
Latin America	78.7	79.2	83.5	83.1	88.9		
	Calorie intake c/						
Africa	93.2	97.3	97.3	98.2			
Asia	99.4	109.2	114.1	112.4			
Latin America	102.6	106.9	108.3	109.3			

Source: Department of International Economic and Social Affairs of the United Nations Secretariat, based on United Nations, World Population Prospects, 1990, Population Studies, No. 120; UNESCO, Statistical Yearbook, 1990, Paris, 1990; UNICEF, The State of the World's Children, 1989, 1990, 1991, Oxford University Press, 1989, 1990, 1991; FAO, FAO Production Yearbook, 1988, vol. 42, Rome, 1989; FAO, The State of Food and Agriculture, 1990, Rome, 1991; and other sources.

(Footnotes on following page)

(Footnotes to table)

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a/ Denotes rates of literacy among sexes, aged 15+, in percentages.

b/ The net enrolment is a ratio indicating the proportion of primary school students enrolled in classes corresponding to their age group.

c/ Daily calorie supply as percentage of minimum requirements.

IV. SUMMARY OF THE EXPERIENCE OF DEVELOPING COUNTRIES CONCERNING THE ERADICATION OF POVERTY

43. There has been measurable progress since the Second World War towards the goal of poverty eradication. Poverty reduction in the developing countries has been achieved through various combinations of reliance on sustained economic growth, income distribution via public expenditures on social services, channelling basic-needs programmes to the poor, and actions of the poor themselves. This progress is reflected in the improvements achieved in poverty-sensitive social indicators, and in the gradual reduction in the incidence of poverty. All of this, however, is not to say that the poor have benefited as much as the rest of the population from rising average incomes and expanding basic-needs coverage. On the contrary, in most cases a disproportionate share of the benefits has been captured by those already relatively well-off. As for the strategies adopted by most developing countries to reduce poverty, assistential programmes rather than land reforms or other asset-enhancing approaches have generally been emphasized. The record with respect to achievements and basic approaches utilized has varied considerably between the countries and periods considered.

44. Gains in poverty-sensitive social indicators have been impressive in countries where government policies and interventions have been based on a long-term commitment to social progress. Notable examples include Costa Rica, where budgetary provisioning of the social sectors is especially high; Sri Lanka, where educational and other services are well developed and a national system of subsidized rice distribution has been kept in effect since the 1940s; China, which for many years emphasized basic-needs approaches that relied primarily on social solidarity and the mobilizing capacity of the State; and Cuba which, through national commitment and substantial foreign assistance, achieved one of the highest levels of basic-need satisfaction attained anywhere in the developing world for a previously marginalized population. On the other hand, the three last-mentioned countries were at first less successful in promoting, through incentives and increased productivity, the economic growth necessary to raise the incomes of the population for obtaining a wider variety of consumer goods. Starting in the late 1970s, as a result, Sri Lanka adopted economic adjustments to restore growth, and China undertook privatization and market-oriented steps in the agricultural, service and industrial sectors to enable its people to help themselves economically and productively.

45. A number of other countries have succeeded in reducing poverty mainly through policies that coupled rapid economic growth with equity-oriented measures. Their poverty reduction efforts have been concerned as much with what people do to earn a living as with what they receive in the way of basic needs. Examples include the Republic of Korea, where nationwide agrarian reforms and export-led economic growth produced a substantial and rapid fall in poverty; Malaysia, where much of the benefits of rapid economic growth have been channelled to the main ethnic group with a low per capita income; Indonesia, where sustained economic growth has been combined with distributive policies that have encouraged increased agricultural output and reduced

inequalities between rural and urban areas; and present-day Chile, where earlier structural reforms in the economy that restored economic growth in the 1980s have been matched by policies of social justice and access to basic needs of benefit to the poor and the non-poor alike.

46. The experience of the majority of developing countries in alleviating poverty, however, has ranged from mixed to disappointing. Most countries, even those assisted with generous amounts of foreign aid, have not found the resources necessary for reducing mass poverty on a significant scale. Many Governments have been too unstable and insecure, and hamstrung by an inadequate command over resources, weak institutional capacity, and insufficient social backing and consensus, to wage war on poverty effectively. Furthermore, recent economic shocks and the historically determined patterns of local exploitation and discrimination against the poor have conspired to undercut the ability of many Governments to eradicate poverty. Other Governments may have chosen not to give much emphasis or attention to poverty alleviation, some because of the structures of the societies from which they derive their support, others because of their preoccupation with internal strife and instability, a few because the majority of their poor are in fact immigrant workers from other countries, and some because they assumed that the trickle-down effects of growth would improve the conditions of the poor in a significant way. Finally, a number of countries have been able to reduce poverty as a result of sustained and rapid economic growth but, because of the unequal distribution of the benefits of that growth, their societies became more polarized and poverty was reduced less than would have occurred under policies of growth with equity. For instance, it is estimated that, if equality in Brazil were comparable to that of Malaysia, poverty in Brazil would have fallen by 43 per cent rather than 29 per cent between 1960 and 1980. 33/

47. The achievements obtained to date in poverty reduction do not appear to be strongly correlated with any particular form or ideological orientation of Governments. Socialist developing countries with planned economies made the elimination of social inequality and poverty a fundamental part of their development strategy, but often failed to generate the resources necessary to improve living conditions significantly. Military regimes have ranged from those with a populist reforming zeal to dictatorships notable mainly for corruption and violations of human rights. Multi-party democracies have, in varying degree and with varying effectiveness, adopted assistential approaches to alleviate poverty, but few have attempted to redistribute land or other productive assets to the poor, on a large scale. Single-party civilian Governments have tended to be more benign than military regimes, but in practice have proved less dedicated to poverty alleviation than multi-party democracies accountable to the poor through the ballot. In sum, given the relatively small net differences between national experiences in eradicating poverty, and the fact that where substantial reductions in poverty have occurred, they have taken place under varying forms of government, it would appear that cultural values and traditions, natural resources endowment, technological changes, the share of savings and productive investment in the economy, and other factors besides governance have played a more important role.

A. Basic-needs satisfaction and human development

48. Human development through basic-needs provision is important to poverty eradication efforts in various ways. It enables the poor to attain competency in literacy, numeracy and problem-solving, which makes them less susceptible to victimization and manipulation by other elements of society and facilitates their access to the resources needed for a decent level of living. It also enables them to live a longer, healthier and more productive life, and to pass on those benefits to their children.

49. During the past three decades, developing countries made substantial progress in human development. Those achievements include an increase in life expectancy in developing countries from 46 years in 1960 to 62 years by the end of the 1980s, an increase in adult literacy rates from 43 per cent to 60 per cent, and a halving of the under-five mortality rate. Moreover, by 1990 over 60 per cent of the population of developing countries had access to public health-care services, and 55 per cent to safe drinking water.

50. Despite the social progress that has been achieved in the aggregate, the human conditions of most of the poor to this day remain appalling. Of every 10 children born to poor parents, it is estimated that 2 die within a year, another dies before the age of five, and only 5 survive to the age of 40. The great majority of poor parents remain to this day illiterate and their children usually do not complete more than a year or two of school. 34/

51. Because of their proximity to modern urban facilities and their effectiveness in pressing local authorities for water and other amenities, the urban poor have had better access to human development needs than the rural poor. The latter, and particularly the most isolated and backward among them, have benefited least and account for most of the shortfall that remains for developing countries to overcome if they are to reach their goals in human development. While the majority of the rural poor have benefited only marginally from the overall progress achieved in basic-needs provision, the record varies considerably from country to country. By and large, middle-income, highly urbanized countries have succeeded in satisfying the basic needs of most of their poor while, with such exceptions as China, Cuba, Sri Lanka, and Tanzania, the majority of low-income developing countries have still a long way to go.

52. When combined with the improved earnings potential and jobs generated by economic growth, access to good quality primary education has been the single most important factor enabling the poor to rise out of poverty. Along with the work-related credential requirements it has imparted, basic education has fostered a capacity for thinking, learning, adaptability, and attitudes towards work that are directly relevant to productive economic activity, and hence to higher wages and salaries in the urban economy. Even if the income returns from education have declined as the proportion of the labour force with primary education has increased, and in the 1980s because of economic stagnation, the availability of education in towns and cities continues to be a major "pull" factor, inducing upwardly mobile rural families and youths to

leave their homes and villages. Where available, rural schools have also helped to prepare for life those young people who do not leave home. In agriculture, for instance, one study has shown that four years of education increased small farm productivity by 7 per cent across 13 developing countries, and by 10 per cent in countries where new agricultural techniques were being introduced. 35/

53. As already noted, however, the children of most of the rural poor do not enrol in schools despite the rewards of doing so and the efforts of most countries to make access to primary education universal. Besides the lack of schools within reasonable walking distance, major impediments to education in rural areas have included the lack of support for education in the local environment, differences between the language of instruction and local languages, household and farm chores that compete for time in the child's schedule, and the high costs to the poor of school fees, uniforms, books and other school supplies.

54. The quality of primary education has also been an issue of concern in developing countries. In many cases, the poor quality of public schools has induced better-off families to choose private schools for their children, thus reinforcing social inequality. Difficulties in attracting qualified teachers, lack of textbooks, inadequate school facilities and other factors leading to low educational results are especially prevalent in remote rural areas where the poor are disproportionately represented. As a result, many parents otherwise supportive of the aims of education decide that the quality of locally available schooling is too low to make it worth the cost. The low quality of schooling has been one of the reasons for low enrolment rates, and is also largely responsible for low school attendance levels and high drop-out rates.

55. Among the rural poor, the enrolment ratios of girls has generally lagged behind that of boys. Even though the gap has narrowed since the 1960s, the disparity remains particularly stark in parts of South Asia, the Near East, Northern Africa and parts of sub-Saharan Africa. The most significant obstacles to female education have included sex-segregated schools, perceived irrelevance of schooling to women's role in society, domand for girls' household labour, and cultural restrictions placed upon females' physical mobility.

56. Besides the potential that education offers women to fulfil and apply their abilities and talents, female education has also been found to mitigate the population, health and nutritional consequences of poverty. As girls become mothers, for instance, those with primary education have fewer, healthier and better nourished and educated children than uneducated mothers at comparable levels of income. Education for girls is thus essential for future welfare and the prospects of poverty elimination.

57. Other factors that have accounted for reduced mortality and improved health in developing countries have included government-supplied health care, immunizations, oral rehydration treatment, pesticide control, food subsidies

and other nutrient supports, and the provision of potable water and sanitary amenities in urban and rural areas. As in the case of education, the benefits of government interventions in the health sector have benefited the poor much less than other social groups. The disadvantaged, whether rural or urban, are more prone to live in places where diseases are endemic, and are less likely to take preventive measures or to seek prompt medical care even when it is available. Moreover, the potential implications of illness are far more severe for the poor than the non-poor. For instance, a poor family lacking kin support is much less able to tide itself over, while a breadwinner is sick. A relatively minor illness may plunge poor families into destitution.

58. In view of the limited access of the rural poor to public health care, many Governments have adopted primary health-care strategies to reach more effectively rural households. While the concept of primary health care has achieved widespread intergovernmental support, putting into practice integrated approaches that span food production, education, water and sanitation, trained community health workers, availability of drugs and other supplies, and community participation has often proved to be more expensive and complex than originally envisaged. None the less, Botswana, Chile, China, Costa Rica, Cuba, India, Indonesia, Jamaica, and Sri Lanka are but some of the countries that have achieved positive results in reducing mortality and illness in urban and rural areas through primary health-care systems. Some of the most effective programmes for reaching rural poor households living in remote and isolated areas have aimed at training traditional health practitioners as paramedical workers and giving them modern medicines to dispense in places which cannot be reached directly by government health programmes. In some countries, however, health-care systems have been strained by new health problems such as the AIDS epidemic and the growing resistance of malaria to current methods of treatment.

59. As a consequence of government interventions in health care, water and sanitation, tropical diseases control through immunizations and pesticides, and - as discussed in part II - substantial reductions in famine mortality, death rates have decreased in the developing world. Those achievements have benefited first of all the urban poor but also, to a lesser extent, the rural poor. Birth rates have also declined, but less so and with a lag. Economic growth, urbanization, education, low infant and child mortality, and access to family planning have all been important in bringing down fertility rates, with progress in the past 25 years especially notable in China, Colombia, Cuba, Indonesia, Jamaica, Mexico, the Republic of Korea and Thailand. Poverty and high fertility, however, continue to coexist in many countries, and are mutually reinforcing. For the poor, children continue to be a form of investment which, in the short-term, provides help in the house and on the farm and, in the long term, is a form of support to parents in disability or old age. The link between household poverty and high fertility is reinforced by high rates of infant and child mortality, and often by cultural norms. However, even many of the rural poor in some countries have been responsive to family-planning approaches when these are appropriately explained, widely available and affordable. While there is no clear and unambiguous correlation between rapid population growth and slow economic growth, other things being

equal, reduced fertility levels leading to slower growth of the labour force and less pressure on formal education and other government-supplied services would make the goal of poverty elimination more achievable.

60. Malnutrition, when interrelated with high fertility, illiteracy, chronic illness and high mortality, forms part of a seamless web of mutually reinforcing determinants of poverty and its perpetuation. Malnutrition is directly related to illness and mortality among children, and is due in turn mainly to the insufficient income of food-deficit households. Ill-informed nutritional practices and inequitable distribution of food within families are also causes of malnourishment. In contrast to most other indicators of well-being, malnutrition in many countries is as serious among the urban poor as it is among households in rural areas - the reason being the competing claims of high food, shelter and public transport costs on the household budgets of the urban poor.

61. Government policies and programmes to combat malnutrition have aimed at raising the incomes of the poor, boosting food production, providing food subsidies of various sorts, fortifying food, and educating people to know about proper diets. Approaches to increasing the incomes and food production of the poor are discussed below. With respect to food fortification, adding iodine to salt has been important in preventing goiter, and in India and Bangladesh, among others, Vitamin A has been administered orally or through injections at six-month intervals to the poor. For the most part, however, other approaches, such as adding specific micronutrients to food at the processing stage, have not benefited the majority of the poor who buy little processed food.

62. As for food subsidies, experience has shown that when channelled to the poor, nutritional adequacy has been achieved at a reasonable budgetary cost to Governments. Channelling approaches have varied, with some based on food stamps for means-tested recipients, others on ration-shop and soup-kitchen outlets in urban and rural areas where the extreme poor are concentrated, and others on subsidizing low-status, less expensive staples that non-poor groups prefer not to consume. As pregnant and lactating mothers and their infants are the most nutritionally vulnerable of the poor, supplementary feeding programmes are often channelled through family-planning clinics and primary health-care centres. Other supplementary feeding strategies in developing countries include school lunch programmes and food-for-work programmes, with food in many cases supplied by food-aid donors. In countries lacking good infrastructure, food security has been ensured by holding small buffer stocks at different places within the country. An example is Burkina Faso, which has pioneered community grain stores and their participatory management.

63. Food subsidies have in some countries played a vital role in reducing the hunger of the poor and freeing some of their income for other basic needs. Sri Lanka in 1970, for example, provided through its ration-and-subsidy programme about 20 per cent of the calories of the poorest quintile of the population, or the equivalent of 15 per cent of their income. 36/ Cuba has also, through an equitable food-rationing system, ensured the food consumption

security of its urban and rural population. Many countries, however, have experienced difficulties with general food-subsidy programmes which became over the course of time very expensive, benefited mainly the urban non-poor, pushed down producer prices with adverse effects on farmer incentives and output, and incited riots and demonstrations when attempts were made to modify or abandon them.

B. Income and assets enhancement

64. The employment opportunities and earning power of the rural poor have been limited by sickness, insufficient food and lack of education, but remedying those ills, while necessary, has not been sufficient to increase the earning power of the poor. Complementary government measures have served an important role in expanding the demand for labour, facilitating the growth of informal sector entrepreneurship, furnishing the material resources necessary for small-farm innovation, and ensuring that more of the gains from the poors' own labour accrues to them and not others. In practice, however, it has generally proved easier for Governments to mobilize resources for basic needs and other assistential programmes than to change the structure of asset-ownership and employment. Even the direct labour absorption provided by the governmental and parastatal sectors has usually done little to eradicate poverty, given that only between 1 and 5 per cent of the labour force in the bottom three deciles of the income distribution of most developing countries are employed in those sectors. 37/

65. Emergency employment programmes, where adopted on a significant scale, have played an important role in meeting the income needs of the poor in times of dire need. While basically welfare-oriented, such programmes have paid cash rather than in-kind incomes, and the pay has typically been for public works and construction labour. The primary purpose of such programmes has been to tide over unemployed urban households during periods of economic stabilization and adjustment, and to smooth the consumption of the rural poor during off-peak periods of agricultural demand, as well as at times of severe drought or floods. By screening participants through self-selection forms of channelling - hard physical labour at below statutory minimum wage pay - non-poor segments of the population have been prevented from capturing the benefits. Compared with food-for-work programmes, moreover, cash payments-for-work have had the advantage of strengthening the effective demand of food-deficit families for locally produced food, thus encouraging farmers to produce a surplus for markets.

66. Of the emergency employment programmes established in response to the economic crisis of the 1980s, Chile's public employment programme was especially noteworthy. At its peak in 1983, it provided employment in infrastructural and construction projects to 13 per cent of the labour force, which brought the unemployment rate down to 19 per cent from the 32 per cent it would have been without the emergency programme. 38/ Bolivia, Peru, Mexico, Ghana, and Madagascar are other countries that also created emergency employment programmes to mitigate the negative effects of the macroeconomic shocks of the 1980s.

67. Other emergency employment schemes in some cases were initiated before the 1980s and have been concerned less with the economic crisis than with reducing fluctuations in the incomes of the extreme poor in rural areas, and in particular in countervailing the potentially devastating effects of droughts or floods on the rural poor. Such public employment schemes were initiated in India in the early 1970s and, during parts of the 1980s, were adopted in Botswana, Cape Verde and Kenya, among others, where they have been credited not only with saving many thousands of lives from famine but also with enabling the rural poor to protect their assets, in particular their livestock, rather than having to sell or consume them to survive.

68. One of the most successful of the rural-based employment programmes has been India's Maharashtra employment guarantee programme. That scheme has provided public works employment to millions of the extremely poor, and has also created a reserve position which has increased unskilled labourers' bargaining position with private employers. Its objective has been to provide at all times of the year employment on request, at a stipulated wage, within 15 days of when needed, and no more than a few miles from participants' homes. An unemployment allowance has been paid when any of those conditions could not be satisfied. 39/ In addition to the transfers made to those in need, rural public employment programmes such as the Maharashtra scheme, when efficiently organized, have proved to be cost-effective in creating and maintaining rural infrastructure, such as road-building, irrigation, soil conservation and afforestation programmes.

69. Whereas emergency employment schemes have had a stabilizing effect on incomes, which has helped the extremely poor to adjust their consumption levels on a seasonal basis or when other sources of earnings fail, other income-enhancement approaches have sought to raise the earnings of the poor by assisting them through credits, and sometimes training and technical assistance, to become small entrepreneurs. Some credit programmes have directly reached the extremely poor by focusing on the day-to-day working capital requirements of street hawkers, market women, and other small retailers. Because the extremely poor are usually risk-adverse, however, the borrowers of capital for investment tend to be mainly from the ranks of the less poor. 40/ On the other hand, loans to such entrepreneurs have generated new jobs for the poor via the needs for labour of the new micro-businesses.

70. Small-entrepreneur programmes - in many cases undertaken by non-governmental organizations (NGOs) - have been noteworthy in Bangladesh, India, Indonesia, Sri Lanka, Ecuador, the Dominican Republic, Kenya, Senegal, Zimbabwe, and a number of other developing countries. In urban areas, and particularly under conditions of import compression, loans have helped viable enterprises to get established, for instance, in the replacement, repair and maintenance of previously imported parts and equipment. 41/ In conditions of economic recovery and growth, moreover, small-scale entrepreneurs have expanded their enterprises and increased their employment levels, thus contributing to poverty reduction. In Ghana, for example, during the economic recovery between 1983 and 1989, average employment levels in a sample of micro-enterprises almost doubled from 3.4 to 6.6 workers. 42/

71. In rural areas where the poor often do not own land or other collateral, lending in a number of Asian countries is often done on a joint-liability group basis in which one member's failure to repay jeopardizes the group's access to future credit. Many, if not most, of the borrowers are women. The credits have gone to small livestock, poultry raising, fisheries, food processing, repair shops, and other purposes which have helped to supplement farm incomes and have created off-farm support services important to rural communities. Rural credit programmes have been particularly effective in countries such as Bangladesh, India and Indonesia where high rural population densities provide helpful agglomeration economies which reduce transaction costs and facilitate the efficient administration of small-scale lending and technical-assistance operations.

72. A more radical approach to increasing the incomes and assets of the landless poor has been to redistribute agricultural lands as part of agrarian reform programmes. Land reforms have been undertaken with varying results in Iraq, the Islamic Republic of Iran, the Republic of Korea and the Syrian Arab Republic in the 1950s; in Bolivia, Chile, Ecuador, El Salvador, Mexico, Nicaragua and Peru, in terms of post-1960s Latin America; and, in the 1970s, in Ethiopia and Zimbabwe. Land was also redistributed on a thorough basis in China, Cuba and Viet Nam at the time that socialist planned-economy Governments came to power. The purpose of land reallocation is to ensure that productive assets are distributed evenly across the rural population. The results of land reforms, however, have been mixed.

73. Land reforms pursued with strong political conviction have improved the living standards and food intake of poor beneficiaries, thus making a substantial contribution to poverty eradication in the rural areas. 43/ As in the case of the Republic of Korea, the results have been positive for the nation as well as for the direct beneficiaries when essential adjuncts such as credits and extension services have been provided, thereby enabling agricultural output to recover and increase after a period of adjustment. On the other hand, politically timid and limited land redistributions, particularly when confined to marginal rural lands and not followed up by extension services, have achieved far less for land reform beneficiaries. Moreover, agrarian reforms in densely settled agricultural areas have typically had little impact on local employment and wage levels, only marginally benefiting those landless and poor peasants who did not receive land. 44/

74. While most land reforms have emphasized individual holdings supported by cooperative forms of capital sharing, some opted for State-owned collective farming approaches. The latter helped to promote national objectives of capital accumulation, full employment, income equality and supplying adequate health and educational services but were less successful in terms of farming incentives, management efficiency and output expansion. Other, more modest reforms have included the imposition of land ceilings, provisions for redistributing uncultivated lands, and policies which have left the distribution of land ownership untouched while attempting to alter the contractual relationship between landlords and tenants. Such reforms have

generally proved easy to evade and thus have had little effect in reducing poverty. Finally, countries such as Brazil, Costa Rica, Indonesia, Malaysia and Peru have encouraged many of the poor to relocate to virgin, unsettled territories.

75. Integrated rural development schemes were promoted in Latin America, Africa and parts of Asia in the 1970s. In Latin America, the adoption of such schemes coincided with a shift of government policies towards a diminished emphasis on agrarian reforms. In some cases, their benefits were captured principally by rural well-to-do groups. Such schemes have been more effective in improving the conditions of the poor when channelled to areas which, for want of good arable land, access difficulties, remoteness and the lack of previous infrastructural investment, were settled only by the poor. In many such cases, however, the investment costs proved to be high and the projects failed to make available improved farming technologies and extension packages suitable to rain-fed areas. In the majority of cases the poor benefited more from the social components of such schemes, in particular schooling, health services, potable drinking water, and improved nutrition, than from the production packages. 45/

C. Impact of structural factors on poverty reduction

76. While the efforts of Governments to provide human development services and enhance the earnings potential of the poor have helped to reduce the share of the poor in the population of many developing countries, other factors have also had an impact on poverty. Trickle-down economic growth, for instance, has played an important role in reducing poverty when the poor have taken advantage of the trickle coming their way. On the other hand, rapid population growth and market-factor imperfections favouring investment in capital-intensive technologies have often combined to exert a downward pressure on employment and a polarization of incomes. 46/ Other factors that have affected progress towards poverty eradication include government investments in physical infrastructure, public authorities' tolerance of people's participation, and the degree to which informal sector livelihoods have been harassed or encouraged. Lastly, stabilization and structural adjustment policies have also had varying and diverse effects on poverty.

77. The effects of economic development and structural change on poverty have in many cases been substantial. With the advent of the "green revolution" in Asia, for instance, it appears that the growth achieved via the new technology on balance benefited the rural poor, even if not as much as the rich. After transitory adoption thereof lags, small farmers have also come to benefit from the new seed-fertilizer technology. 47/ Agricultural labourers have also been positively affected as a result of the associated increase in demand for labour; even if wages did not rise, they at least did not fall as much as they would have in the absence of new technology. 48/ As consumers, both the rural and urban poor, for whom food forms a large percentage of consumption expenditure, gained from lower food prices, or at least from food prices that rose less than otherwise would have been the case. 49/ On the other hand, in

some cases there were negative effects on the rural poor due to labour-displacement and eviction of tenants owing to the increased profitablity of self-cultivation by landowners.

78. In much of Latin America, on the other hand, the "green revolution" had a less benign effect on the rural poor. Control over land and the components of the new agricultural technology became increasingly concentrated in some countries, which raised the incidence of landlessness and near-landlessness among large numbers of the rural poor and forced many of them to migrate to the cities and towns or to become more dependent on earning wages for subsistence. On the other hand, as part of strategies to cope with and benefit from agricultural modernization, many enterprising peasants intensified and diversified their productive activities on their plots. They stepped up the investment of their most abundant resource, family labour, in clearing the land, improving drainage and irrigation, protecting the land from the threat of floods, and so forth. As noted in part III, small farmers in many such instances started growing food products in demand in national markets, and adopted the use of better seeds, chemical fertilizers, pesticides, and other technological changes within their reach to increase their yields and thereby compensate for the small size of their plots. However, despite their success in inserting themselves into national markets, the dominance of middlemen and other structural factors reduced the gains for most small producers. 50/

79. Physical infrastructure projects have generally had positive effects on the incomes of the poor as well as the non-poor. For one thing, as already noted, the construction and maintenance of feeder roads, irrigation ditches, flood control embankments, and so on, have provided off-peak seasonal work for underemployed labourers participating in public employment schemes. Such infrastruture projects have been valuable to rural communities, especially when rural populations participated in choosing them. They have also often had valuable multiplier effects, as in the case of rural roads facilitating access to markets from remote rural areas and encouraging the development of small enterprises in the corresponding market towns. Thus, in Bangladesh, a study found that incomes among the poor rose by a third, with other factors controlled, as a result of the provision of public infrastructure to rural areas. 51/ In Pakistan, the earnings of landowners in irrigated areas was 70 per cent higher than for a control group in rain-fed areas, while that of landless workers was almost 15 per cent higher than in the control group. 52/ Thus, while the well-off in most cases have probably profited more from infrastructural investments in rural areas than the poor, the latter also have often benefited.

80. Investments in urban infrastructure, particularly in uncontrolled settlements in peripheral areas, have also had positive effects on poverty reduction by improving living conditions and promoting employment. For instance, access to public utilities has been critical for encouraging the growth and spread of small enterprises, since most are not able to afford investing in their own power generators or water facilities. 53/ Moreover, besides the labour-intensive employment that they directly provide, infrastructure programmes carried out in uncontrolled urban settlements have

had valuable multiplier effects through the inducement they have on residents to improve their dwellings. Piped water, for example, has been found typically to double the value of otherwise comparable dwellings, and residents in such cases have made home improvements that have generated construction jobs in their communities. 54/

81. The prevailing duality that underlies many aspects of urban life, while initially favouring rural emigrants and other poor people to gain a foothold in urban surroundings, makes it difficult for them eventually to gain access to national resources. While some of the makeshift stock of unauthorized urban housing is eventually converted into durable housing with standard utility connections, more often such improvements do not take place, the main reason being the poors' lack of security of land tenure and their fear of bulldozer eradication. Informal sector enterprises are impeded by urban regulations from graduating to formal status where they would be eligible to seek public sector contracts, commercial loans, import licences and public utility hook-ups. Moreover, as formal-sector enterprises, they would be free from some of the harassments to which informal-sector enterprises, often for valid reasons, have been subjected. 55/

82. Although reluctant to compromise developed-country standards and regulations, and hence little inclined to adopt innovative strategies that could assist the informal sector to improve and modernize itself, 56/ developing-country Governments are increasingly aware of the negative impact that regulatory hindrances and arbitrary interventions have in terms of enabling the urban poor to participate more fully in the economy and urban life. In view of this concern, some Governments have taken promising structural initiatives in their urban informal housing and transport sectors. In Lima, Peru, for instance, a recent law allows urban squatters to record possession, not ownership, of the land that they live on, assign the property rights to their dwellings to an insurance company in exchange for guarantees that loans made to them will be repaid, and thus negotiate loans with banks to start up or expand small enterprises. 57/ Through a series of decrees and resolutions, the local authorities of Bogota, Colombia, have guided and controlled that city's informal land and shelter production process by enabling all participants in the subdivision process - landowners, developers, allottees and public agencies - to know their own responsibilities and the responsibilities of others under the law. Bogota's local authorities have also removed the legal distinctions between formal and informal housing solutions by retroactively giving self-builders building licences that make their structures legally authorized, whether or not the owners had complied with building codes when constructing their dwellings. 58/ In Nairobi, informal matatu transport owners have been encouraged to improve their standards of service and, as a result, are now fully integrated into the city's mass transit system. 59/ Such initiatives need not be limited to housing and transport and, if extended to other areas of informal activity as well, would enable the indigenous entrepreneurship and adaptative strategies of the poor to be channelled in ways more conducive to appropriate urban development, increased productivity, and fuller integration of the city poor into modern urban life and national economic development.

83. Stabilization and structural adjustment programmes have also had implications for the poor. Their effects have been largely intertwined with those of the economic crisis reviewed in part III, but a few additional observations can be made. One important point is that devaluations have had mixed impacts on poverty, in some cases positive for some of the rural poor but negative for many of the urban poor. An example is Ghana where large numbers of the rural poor grow food for local markets or cocoa for export, and where the consumption of most of the urban poor includes many imported wage goods. Secondly, the fiscal and monetary elements of stabilization programmes generally affected both the rural and urban poor negatively. However, the effects were not uniform for both groups. Because the rural poor have traditionally benefited less from public expenditures than the urban poor, adjustments of the fiscal deficit on current expenditures were more damaging for the urban poor. 60/

84. As for the emphasis on structural adjustments in sub-Saharan Africa in order to encourage greater farm output through relative price incentives, there appears to have been only very limited improvement to date in the conditions of the rural poor. The main reason is the deep-seated constraints that exist on the supply side of agriculture in the region. Infrastructural constraints in transport, communications, power, storage and market services have inhibited the ability of farmers, whether large or small, to respond to higher prices. The lack of consumer goods in many rural areas, moreover, has done little to encourage farmers to increase their cash earnings. The fall in international commodity prices has, in many cases, limited the extent to which domestic producer prices have actually risen. In short, while producer price increases represent an important step in the right direction, aggregate agricultural output in sub-Saharan Africa will grow only if, in addition, more resources are devoted to agriculture, and if technology changes. 61/

V. INTERNATIONAL POLICY MEASURES FOR ERADICATING POVERTY

85. If poverty is to be significantly reduced and eventually eliminated, the right kind of domestic policies will have to be accompanied by long-term external support. Expanded assistential programmes for the poor will need to go hand in hand with greater opportunities for the productive use of their labour. Although the historical experience of some countries shows that poverty can be reduced without rapid economic growth and at modest levels of per capita income, the feasibility of poverty eradication is clearly facilitated by sustained growth. Developing countries will have the central role, but their efforts must be complemented by industrial-country policies in debt relief, trade, finance and poverty-oriented technical assistance. As stated in the International Development Strategy for the 1990s: "the struggle against poverty is the shared responsibility of all countries". 62/

86. Historically the growth of developing countries has tended to move closely with the growth of industrial countries. Their economies have been closely linked to the industrial countries, chiefly as suppliers of raw materials. Other things being equal, simulation findings of the World Bank

suggest that an increase of one percentage point in the growth of the developed countries could raise the growth of the developing countries over the long term by 0.7 per cent. Moreover, if the growth rates for developing countries were to average 3 per cent per capita in the 1990s - an optimistic assumption which would need a mix of steady growth in the developed countries combined with more open markets for developing-country exports and effective debt relief measures - the number of poor people in developing countries could, according to the World Bank, fall from 1.1 billion in 1985 to 825 million by the year 2000. 63/

87. Generally, United Nations baseline scenarios do not foresee much change for developing countries in the 1990s, as compared with the 1980s. 64/ World economic growth is expected to be significantly below its long-term historical trend but somewhat higher than recent experience. As a result, many of the developing countries would continue to experience acute poverty with little prospect for improvement. According to this baseline scenario, 976 million people, as compared with 1.05 billion in 1990 and 994 million in 1980, would still have a per capita annual income of less than $US 300 per year (in 1980 dollars) by the year 2000. Furthermore, all the improvement is expected to take place in the Asian region, while in Africa and Latin America and the Caribbean, the number of people in this category is projected to increase. In Africa, where persons obtaining less than $300 per year grew in number in the 1980s by 94 million, an increase of an additional 91 million is foreseen in the 1990s, bringing the total to 326 million people by the year 2000. For Latin America and the Caribbean, the corresponding figures are 26 million people in the 1980s and an additional 2 million in the 1990s, which makes a total of 42 million by the end of the millennium. 65/

88. While the poverty reduction forecasts of the United Nations and the World Bank are not strictly comparable from a methodological standpoint, the difference of roughly 150 million people in poverty arrived at by the two simulations is broadly suggestive of the gains in poverty eradication that could be gained in the present decade from a more favourable international economic environment, everything else being equal. A potential 10-year gain in poverty eradication of that magnitude underlines the importance of a favourable and supportive world economy to aggregate poverty-reduction efforts in the developing countries.

A. Improving the international economic environment

89. A first priority in restoring a favourable external environment is to increase the transfer of resources to developing countries. This is possible in many instances only if a solution is found to the debt crisis. At present, debtors in untenable situations have suspended payments; and bank creditors, most of whom had already made provisions for this eventuality, have tended to yield to realities. Also, the International Monetary Fund has found ways to mobilize support for coping with arrears to the Fund. 66/

90. While the need for debt relief has been recognized in recent years, the cuts in commercial and official bilateral debt remain modest. The question is whether those cuts have been deep enough to allow debtor countries a fresh start, and whether they have inspired enough confidence to attract flight capital to return and investors to commit themselves to the future of those countries.

91. Simulation scenarios provide estimates of the linkages between external finance and economic growth. According to UNCTAD calculations, if 30 per cent of the commercial debt of the heavily indebted countries were written off and international interest rates fell by 2 per cent, GDP growth in the heavily indebted countries would be 0.3 per cent per year higher in the first five years, and in all developing countries 0.1 per cent higher. 67/ Lower real interest rates would accelerate growth in the developed countries and, as a result, in the developing countries as well. In that respect, United Nations simulations point to an increase of 0.4 per cent in average annual growth of GDP in the developing countries, following an 0.5 per cent increase in growth per year in the developed countries which lower interest rates would help achieve. 68/ Moreover, if additional flows of capital were made available to developing countries, growth would be spurred by a further 0.1 or more. 69/ Thus, if substantial debt relief, combined with lower interest rates and fresh flows of capital, can be achieved, developing countries would be likely to experience a significant improvement in their overall rates of economic growth.

92. More generally, the whole array of policies that determine non-concessional capital flows - official, bilateral and multilateral - has to be considered in order to ensure that domestic efforts are fully supported. Growing investments are required to ensure sustained growth.

93. In addition to increased capital flows, international trade and growing export earnings are essential for the overall growth of developing countries. Those that remain locked into dependence on exports of one or a few raw materials for which world demand is sluggish would benefit considerably from reductions of tariffs on processed products which would facilitate diversification. Moreover, protective barriers and subsidies in labour-intensive industries in the developed countries have been detrimental to poverty reduction efforts in some developing countries. According to one estimate, protectionism in the industrial countries is costing developing countries $US 100 billion annually in lost revenues for agricultural products, and a further $50 billion for textiles and clothing. 70/ Trade liberalization, particularly in agriculture, would benefit some developing countries through a combination of two effects: the world price, associated with trade liberalization, and the potential increase in the quantity of their net exports to developed countries. 71/ There has been progress in the Uruguay Round on services, tropical products and functioning of the GATT system, but issues of general benefit to developing countries that remain unsettled include a selective liberalization of agriculture, reduced textiles and clothing restrictions, the removal of tariff protection against the processing of commodities in developing countries, and the elimination of various non-tariff barriers, such as quantitative restrictions on sugar, rice, tobacco and animal products.

94. There is considerable scope for developing countries to strengthen trading ties with one another. In situations of constrained foreign exchange, counter-purchase bilateral trade arrangements have been resorted to, as in the case of trading between Brazil and Nigeria in the 1980s. Some present developing-country trade blocs offer promising prospects for the countries concerned, in particular the Southern Cone Common Market (MERCOSUL) which consists of Argentina, Brazil, Paraguay and Uruguay. Some actual or potential groupings of countries, however, have had difficulties in agreeing over membership, common external tariffs and other conditions, or are mainly primary exporters with little to trade among themselves. 72/

B. Reorienting official development assistance (ODA)

95. Official development assistance (ODA) is important for economic growth and poverty reduction in many developing countries. In sub-Saharan Africa in particular, ODA in the 1980s amounted to about 10 per cent of the region's GNP; in at least seven African countries it was a much more important source of foreign exchange than exports. The inflows of ODA to the region in the 1980s, in fact, exceeded the outflows corresponding to interest payments on external debt. The share of ODA to GNP of other regions has been very much smaller - 0.8 per cent for Asia and 0.5 per cent for Latin America. 73/

96. If ODA were increased, it could have a major impact on economic growth in developing countries. According to United Nations simulations, if annual ODA to developing countries were doubled in the 1990s to reach 0.7 per cent of the GDP of the industrial countries, annual growth in the developing countries would increase by 0.2 per cent. 74/ That increase in ODA, amounting roughly to $US 144 billion by the year 2000, 75/ could be financed from a 5 per cent "peace dividend" reduction in military expenditures of the developed countries. 76/

97. Disarmament has now become a reality and not just a distant hope, and significant reductions in military spending in developed countries are anticipated. This will ease the budgetary constraints of major donor countries, but as many of them are in deficit they may well take advantage of this opportunity to consolidate their public finances. Whether they will increase their ODA allocations will depend not only on the increased room for financial manoeuvre but also on the political priorities attached to development assistance.

98. The criteria utilized in allocating ODA may be as significant as its volume in terms of reducing poverty. If used primarily for poverty reduction, properly channelled ODA could, with the same amount of funds as today, reduce total poverty in developing countries substantially. 77/

99. After decades of frustration over the limited impact which ODA has had on poverty reduction, humility and realism are in order when proposing new initiatives and orientations. From the review earlier in this report of issues and approaches that have empirically been found to help reduce poverty,

the conclusion must be that long-term sustainable poverty-reduction programmes have to emphasize education, nutrition, health and economic growth that are directed towards the poor. Such objectives are natural ODA priorities. A few more considerations may be suggested.

100. First, restructuring and channelling ODA more effectively towards poverty reduction would also be helpful for rebuilding public support for ODA within donor and recipient countries. Convincing approaches and improved performance and results, however, might be needed to overcome an accumulated legacy of public scepticism and aid fatigue.

101. Priority might be given to alleviating the plight of the extremely poor first, and the other poor later. The extremely poor have the greatest needs and thus a greater moral claim for entitlement to food security and access to basic human needs. Moreover, since their deprivation and disadvantaged situation has often been an outcome of historical injustices, helping the extremely poor to rise out of poverty, to participate more equitably in society and to reap more benefit from economic growth would also strike a blow at the social injustice that holds back national development in many countries.

102. Secondly, the time may be opportune for reviewing the effectiveness of technical assistance programmes with regard to poverty reduction interventions. Within the United Nations system, such a review is undertaken annually under the aegis of the United Nations Office of the Director-General and UNDP. 78/ The findings are disturbing. For example, according to UNDP, Africa is receiving $6 billion in technical assistance each year, i.e. over $22 per person, and the figure is rising. 79/ In some developing countries, the amount of funds flowing into the salaries and travel of foreign experts and consultants exceeds those countries' national civil-service wage bill. 80/ In those and similar cases it would seem that the institution-building needed for poverty reduction programmes might better be served if the role of foreign experts were to be limited to assisting in the planning, monitoring and review of ODA-supported programmes and the bulk of the funds were to be used instead for the training and sharing of recurrent expenditures necessary for supporting the community-action promoters and rural extension agents of national agencies and non-governmental organizations at the grass-roots level. Some of the funds could also be applied to the scientific and technological research requirements discussed below.

103. Donors may wish to review what they consider the mission and comparative advantage of ODA to be in poverty eradication. While generally perceived as the transfer to developing countries of capital and technical know-how, that second element has declined in significance over the years as developing-country officials gain experience and knowledge about development problems in their own countries and feasible approaches to handling them. In a sense, much of the basic know-how has already been passed on, and much of the credit for that goes to ODA efforts of past decades. New technologies are emerging, or are on the horizon, which ODA could make use of and help to adapt to the needs of the poor in developing countries. Given the divergence between social and private benefits from innovation, ODA would perform a

critical service in harnessing the benefits of private research in the developed countries for the benefit of the poor in developing countries. 81/ New technological advances and prospects are especially evident as regards the food security, health and family-planning needs of the poor in developing countries.

104. The health-care sector offers examples of forms of partnership that could be organized for promoting international cooperation through improved technology to alleviate poverty. Efforts to eradicate the Guinea worm in West Africa, for example, have involved donors, the World Health Organization (WHO), private companies such as E. I. Dupont's contribution of nylon filters and American Cyanamid's donation of Abate larvicide, and the role of the Carter Center in Georgia in fashioning this partnership in international assistance. Similarly, UNDP, WHO and the World Bank teamed up with the Merck pharmaceutical company to develop and test a drug called "Ivermectin" which Merck provides free of charge in Africa and Latin America for treating onchocerciasis, or river blindness. Other possible areas of health-care research cooperation between the private sector, donors and international agencies include developing new vaccines and improving existing ones to combat major tropical diseases, and facilitating the application of all vaccines by means of a one-shot or one oral-dose approach. 82/

105. Family planning is another priority area for enhanced cooperation between the private sector, ODA and developing countries. It is estimated, for example, that the number of births would fall by 32 per cent in Latin America and 25 per cent in Africa if women could exercise their right to have the number of children they want. 83/ An improved family-planning method, Nortplant, has already been developed with support from WHO, the Population Council and Family Planning International, and further advances are anticipated in the future, including long-acting hormonal methods, such as biodegradable implants and injectible microspheres, and a male vaccine.

106. The most critical area, however, for linking science, technology and poverty is in reducing food insecurity which is the most fundamental manifestation of extreme poverty and vulnerability. Macro-model simulations suggest that an anti-poverty programme which puts emphasis on food gains will help the rural poor more than any other type of growth-oriented development strategy. 84/ The commitment to eliminating chronic hunger and malnutrition would focus on sustainable measures for increasing producer output in areas having poor soils and low, uncertain rainfall, thus tying together the relationship between malnutrition, access to food and livelihood security for the poor, and food output that keeps up with rapid population growth.

107. In food-related science and technology, a new generation of technologies is beginning to reshape developments in the agro-food sector. Of particular promise to the small-holder sector of developing countries, and in particular of Africa, is current research emphasizing low-input innovations that would reduce costs and intensify the production of drought-resistant crops. Already biotechnology has been applied at the cell level in the use of tissue-culture techniques for potatoes in Kenya and single-cell protein in Nigeria. 85/

Biotechnology using recombinant techniques at the level of the gene, or genetic engineering as it is called, has allowed scientists in China and Australia to develop plants that fix their own nitrogen in the way legumes already do. 86/ Such applications hold out the prospect of increasing soil fertility and arresting environmental deterioration through the direct fixation of airborne nitrogen via micro-organisms, thus replacing the need for nitrogenous fertilizer. Genetic engineering has also been used to protect plants against the pests and virus diseases to which they are susceptible. 87/ By changing the maturation and ripening cycles of particular plants, and by developing seeds that are drought-resistant and do not require heavy inputs, the new technology could reduce the vulnerability of small farmers to seasonal changes and, at the same time, permit double or multiple cropping, as in the case of the "green revolution" technology. 88/ Thus, biotechnology developments offer the prospect of achieving benefits obtainable from the "green revolution" without the same demands for irrigation, fertilizers and other inputs associated with the latter technology, and in an environmentally more benign manner.

108. The development of seeds to fit into the above ecological niches would require a close partnership between the large companies that are carrying out research in biotechnology applications to agriculture, the donor Governments, international organizations, and new or strengthened regional and national biotechnology centres. 89/ A benefit to those companies that would participate might be to facilitate their access to useful genes from plants that have many uses for small farmers and pastoralists in developing countries but remain unknown in the industrial countries. 90/ It would be important, moreover, to maintain genetic banks to label and store those traditional seeds lest the shrinkage of genetic diversity, resulting from the introduction of uniform biotechnologically-made seeds, should expose large regions to the risk of famine if the new seeds were to prove vulnerable to unanticipated pests or diseases. 91/

109. Of course, the introduction of new technologies, would not change the basic nature of ODA-supported efforts at the national and grass-roots level in developing countries. For instance, in any event the benefits of new seeds must always be clearly apparent to farmers. Ideally, technology production and farm adoption would in fact be closely coupled and the needs of the small producers would propel the techn/ ogy search and development efforts, not the other way around. Such an approach would be necessary if the gap between knowledge and practice were to be closed. In short, in the transfer of new technology, as in any form of ODA, the poor are not simply beneficiaries of poverty-eradication efforts; they must also be the primary instrument of those efforts.

Notes

1/ In Europe, for example, recorded official concern over poverty goes back at least to the sixteenth century. See G. Rude, Europe in the Eighteenth Century: Aristocracy and the Bourgeois Challenge, Cardinal History of Civilization, London, 1974, pp. 90-91.

2/ M. Wolfe, Elusive Development, UNRISD Report 80.03, Budapest, 1981, p. 215.

3/ The Declaration, in paragraph 18, stresses the importance of reversing the current deterioration in the incidence of poverty in developing countries and urges the international community to support efforts at arresting this growth in extreme poverty and hunger.

4/ The International Development Strategy for the 1990s, in paragraphs 79-86 of resolution 45/199 of 2 December 1990, cites the goal of eradicating poverty as being of the highest priority. It welcomes, as an encouraging trend, the emergence of a broad consensus on the strategies to be pursued towards that goal. The Strategy also recommends broad-based progress in development as the best way to generate employment and incomes for most of the poor and, for the poorest and most vulnerable of the poor, advocates special targeted programmes and measures. In the long run, it concludes, economic growth is necessary to raise living standards and eliminate poverty, but in the interim developing countries could reduce the extremes of poverty, such as hunger and destitution, through well-conceived social measures. The struggle against poverty, according to the Strategy, is the shared responsibility of all countries, both developing and developed.

5/ World Bank, World Bank Development Report 1990: Poverty, Oxford University Press, New York, 1990.

6/ See, in particular, UNDP, Human Development Report 1990 and Human Development Report 1991, Oxford University Press, New York, 1990 and 1991.

7/ National papers on agrarian systems and the alleviation of rural poverty, presented to the FAO/ESCWA Expert Consultation of Agrarian Systems and Socio-Economic Implications of Fragmented Holdings in the Near East. The basic paper of the meeting was: K. Griffin and J. Boyce, "Dynamics of rural poverty and measures for its alleviation, with special reference to the Near East", E/ESCWA/AGR/WG.18/12, Nov. 1985.

8/ A. Cornia, R. Jolly and F. Steward, eds., Adjustment with a Human Face, vol. 1, Oxford University Press for UNICEF, New York, 1987.

9/ In some countries, missionaries played an important role in introducing the rural poor to the language, religion, and culture of the dominant classes, thus paving the way for those poor's access to the opportunities made available by modernization and economic development.

Notes (continued)

10/ In the case of famine mortality and chronic hunger and malnutrition in sub-Saharan Africa, for example, see: J. Iliffe, The African Poor: A History, Cambridge University Press, 1987, pp. 157-163.

11/ See, for example, W. Ascher, Scheming for the Poor: The Politics of Redistribution in Latin America, Harvard University Press, Cambridge, Mass., 1984.

12/ See, for example, M. Clark, "Household economic strategies and support networks of the poor in Kenya: a literature review", Discussion Paper No. UDD-69, World Bank, Washington, D.C., July 1985.

13/ See, for example, R. Wage, "The management of common property resources. Collective action as an alternative to privatisation or state regulation", Cambridge Journal of Economics, vol. II, 1987, pp. 95-106; R. Cline-Col, H. Main, and J. Nichol, "On fuelwood consumption, population dynamics, and deforestation in Africa", World Development, vol. 18, No. 4, April 1990, pp. 513-527; and A. De Janvry and R. Garcia-Barrios, "Rural poverty and environmental degradation in Latin America: causes, effects and alternative solution", IFAD, Rome 1988.

14/ See, for example, R. Chambers, ed., "Vulnerability: how the poor cope", IDS Bulletin, vol. 20, No. 2, April 1989.

15/ For further details, see: M. Lipton, The Poor and the Poorest: Some Interim Findings, World Bank Discussion Paper No. 25, 1988.

16/ See World Bank, World Bank Development Report 1990: Poverty, op. cit., table 2.1.

17/ See United Nations, "International cooperation for the eradication of poverty in developing countries", A/44/467, 1989, table 1; and United Nations, Overall Socio-Economic Perspective of the World Economy to the Year 2000, Sales publication No. E.90.II.C.2, 1990, table III.5.

18/ See ECLAC, "Magnitud de la pobreza en América Latina en los años ochenta", LC/L.533, Santiago, May 1990, p. 67.

19/ In terms of factor payments, wages fell and operating surplus rose more in the heavily indebted countries of Latin America than in developing countries as a whole during the 1980s. This shift in the functional distribution of income away from labour towards owners of capital and savers was closely related to the exigencies of servicing the external debt. See United Nations, World Economic Survey 1990, Sales No. E.90.II.C.1., 1990, chap. VII.

20/ See ILO, World Labour Report, 1989, vol. 4, Geneva, 1989, table 1.9.

Notes (continued)

21/ See United Nations, 1989 Report on the World Social Situation, Sales No. E.89.IV.1, 1989, p. 41.

22/ Based on official data for Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Venezuela. See PREALC, "Evolution of the labour force market during 1980-1987", Santiago, 1988.

23/ The implication of those estimates is that the growth of the informal sector was driven more by the supply of labour to the sector than by demand for its services and output. Ibid.

24/ Ibid.

25/ See ILO, "Temporary labour in Latin America", Geneva, 1986.

26/ See J. Azam, G. Chambas, P. Guillaumont and S. Guillaumont, "The impact of macroeconomic policies on the rural poor", UNDP Policy Discussion Paper, United Nations publications, Sales No. E.89.III.B.5, New York, 1989, p. 23.

27/ See J. Chonchol, "Agricultural modernization and peasant strategies in Latin America", International Social Science Journal, May 1990, pp. 135-151.

28/ See ILO, African Employment Report, 1988, Addis Ababa, 1989.

29/ See V. Jamal and J. Weeks, "The vanishing rural-urban gap in sub-Saharan Africa", International Labour Review, vol. 123, No. 3, 1988.

30a/ D. Lal and H. Mynt, "The political economy of poverty, equity and growth: Indonesia and Nigeria" (unpublished World Bank study, Sept. 1988), pp. 215-220.

30b/ Undernourishment levels correspond to 1.2 basic metabolic rate (BMR) or below, with 1.2 BMR being the energy level necessary to maintain the body at rest, without physical activity. See FAO, Agriculture toward 2000, (revised version 1987), C87/27, July 1987, p. 66.

31/ Based on IMF, Government Financial Statistics, Washington, D.C., 1991. See also, among others: United Nations, "Supplement to the 1989 Report on the World Social Situation", E/1990/351, 1990, chaps. I and II; G. Cornia and F. Stewart, "The fiscal system, adjustment and the poor", UNICEF Innocenti Occasional Papers No. 11, Florence, 1990; D. Berstecher and R. Carr-Hill, Primary Education and Economic Recession in the Developing World since 1980, UNESCO, Paris, 1990; P. Musgrove, "The economic crisis and its impact on health and health care in Latin America and the Caribbean", International Journal of Health Services, vol. 17, No. 3, 1987; G. Pfeffermann, "Public expenditure in Latin America: effects on poverty", World Bank Discussion Paper No. 5, Washington, D.C., 1987; and M. Gallagher and O. Ogbu, "Public

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expenditures, resource use and social services in sub-Saharan Africa", Africa Technical Department, World Bank (unpublished), 1989.

32/ Most of the information on public expenditures and related indicators are from: M. Gallagher, "Fiscal duress and the social sectors in developing countries", Africa Technical Department, World Bank (unpublished), 1989. See also: B. Fuller and S. Heyeneman, "Third World school quality; current collapse, future potential", Educational Researcher, vol. 18, No. 2, March 1989.

33/ World Bank, World Development Report: Poverty, op. cit., p. 47.

34/ World Bank, "Primary education: a World Bank policy paper", Washington, D.C., 1990, p. 10.

35/ Ibid., p. 10.

36/ See P. Isenman, "Basic needs: the case of Sri Lanka", World Development, vol. 8, No. 3 March 1980, pp. 237-258.

37/ In Peru, for example, the figure was 3.5 per cent, in Côte d'Ivoire, 1.6 per cent. See P. Glewwe and D. de Tray, "The poor in Latin America during adjustment: a case study of Peru", LSMS Working Paper No. 56, World Bank, Washington, D.C., 1989; and P. Glewwe and D. de Tray, "The poor during adjustment: a case study of Côte d'Ivoire", LSMS Working Paper No. 47, World Bank, Washington, D.C., 1988.

38/ See J. Martinex, "Efectos sociales de la crisis económica: Chile, 1980-1985", LC/R.519, ECLAC, Santiago, October 1986.

39/ See J. Dreze and A. Sen, Hunger and Public Action, Clarendon Press, Oxford, 1989, chap. 8.

40/ An example helps illustrate the point. In India, the Integrated Rural Development Programme (IRDP) often makes loans to enable farmers to purchase milch cows. For a farmer who already owns land and animals, it is easy to make use of an additional cow. For an assetless household, however, if the milch cow shortly thereafter falls ill and dies, the household is left with a debt larger than its annual income and is ruined. Because of such concerns, extremely poor households are often reluctant to take a chance with loans of that sort. The example is based on: P. Seabright, "Quality of livestock assets under poverty alleviation schemes: evidence from South Indian data", Churchill College, Cambridge (unpublished), 1989.

41/ See United Nations, "International cooperation for the eradication of poverty in developing countries", A/44/467, op. cit., part A1.

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42/ See W. Steel and L. Webster, "Small enterprises in Ghana: responses to adjustment", World Bank Industry Series No. 33, Washington, D.C., 1990.

43/ To take an example, suppose the beneficiaries comprise 40 per cent of the rural population and before the land reform received 8 per cent of total rural income, their normalized income per head would therefore have been 0.2, i.e. 8 divided by 40. Thus, even if total output were to fall after the land reform, the beneficiaries would still benefit provided output did not fall by more than 80 per cent. Since that is very unlikely, it is safe to assume that reform beneficiaries would be better off as a result of land reforms.

44/ See, for example, W. Thiesenhusen, ed., Searching for Agrarian Reform in Latin America, Unwin Hymen, London, 1989.

45/ See, for example, the evaluation findings in: M. Cernea, "Measuring project impact: monitoring and evaluation in the PIDER rural development project - Mexico", World Bank Staff Working Paper No. 332, Washington, D.C., 1979.

46/ See, for instance, K. Griffin and A. Ghose, "Growth and impoverishment in rural areas of Asia", World Development, vol. 7, 1979, pp. 361-383.

47/ See, for example, G. Scobie, "Investment in international agricultural research: some economic dimensions", World Bank Staff Working Paper No. 361, Washington, D.C., 1979.

48/ See, for instance, D. Lal, "Agricultural growth, real wages and the rural poor in India", Economic and Political Weekly, vol. 11, No. 26, 1976.

49/ See, for instance, H. Binswanger, "Income distribution effects of technical change: some analytical issues", South East Asian Economic Review, vol. 1, 1980, pp. 199-218.

50/ See J. Chonchol, "Agricultural modernization and peasant strategies in Latin America", op. cit., pp. 135-151.

51/ Based on R. Ahmed and M. Hossain, "Developmental impact of rural infrastructure: Bangladesh", International Food Policy Research Institute, Washington, D.C. (unpublished), 1988.

52/ See A. Ercelawn, 'Income equality in rural Pakistan: a study of sample villages", Pakistan Journal of Applied Economics, vol. 3, No. 1, Summer 1984.

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53/ See, for example, K. Lee and A. Anas, "Manufacturers' responses to infrastructure deficiencies in Nigeria: private alternatives and policy options", Infrastructure and Urban Development Department Discussion Paper INU 50, World Bank, Washington, D.C., 1989.

54/ See United Nations, Housing and Economic Adjustment, Taylor & Francis, New York, 1989, p. 9.

55/ For example, the closure in Kenya of Nairobi's food kiosks in 1980, for fear of cholera, is estimated to have left 5,000 people jobless. See J. Iliffe, The African Poor: A History, op. cit., p. 244.

56/ For more on the subject, see: J. Midgal, Strong Societies and Weak States: State-Society Relations and State Capabilities in the Third World, Princeton University Press, Princeton, 1988.

57/ See "Black economies in Latin America: safe as houses", The Economist, 12-18 November 1988, p. 78.

58/ See United Nations, Housing and Economic Adjustment, op. cit., pp. 15-16 and p. 24.

59/ See D. Lee-Smith, "Urban management in Nairobi: a case study of the matatu mode of public transport", in R. Stren and R. White, eds., African Cities in Crisis: Managing Rapid Urban Growth, Westview Press, Boulder, 1989.

60/ Based on: A. de Janvry, A. Fargeix, and E. Sadoulet, "Economic welfare and political consequences of stabilization policies: a general equilibrium approach", World Bank, Washington, D.C. (unpublished), 1989.

61/ See, for example, G. Cornia and R. Strickland, "Rural differentiation, poverty and agricultural crisis in sub-Saharan Africa: toward an appropriate policy response", Innocenti Occasional Papers No. 4, UNICEF, Florence, July 1990.

62/ See General Assembly resolution 45/199, op. cit.

63/ See World Bank, Global Economic Prospects and the Developing Countries, Washington, D.C., May 1991, p. 5; and World Bank, World Development Report: Poverty, op. cit., chap. 9.

64/ The United Nations scenarios, as discussed in this part of the report, are based on: United Nations, Overall Socio-Economic Perspective of the World Economy to the Year 2000, Sales No. E.90.II.C.2, chap. III.

65/ See United Nations, "International cooperation for the eradication of poverty in developing countries", A/44/467, op. cit., table 1 for 1980s data; and United Nations, Overall Socio-economic Perspective of the World

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Economy to the Year 2000, op. cit., table III.5 for projections corresponding to 1990 and 2000.

66/ See United Nations, World Economic Survey 1991, Sales No. E.91.II.C.1, 1991, p. 4 and, for a detailed analysis, chap. IV.

67/ Based on modelling utilizing the System for Interlinked Global Modelling and Analysis (SIGMA), developed and maintained by UNCTAD. See United Nations, Overall Socio-economic Perspective of the World Economy to the Year 2000, op. cit., pp. 54-55.

68/ Based on simulations using the global econometric model (GEM), developed and maintained by the Department of International Economic and Social Affairs of the United Nations Secretariat. See ibid.

69/ For example, according to simulations using the Future of Global Interdependence model (FUGI) developed and maintained at Soka University in Japan, developing countries would grow by an additional 0.1 per cent annually as a result of an increase in capital flows from Japan of $30 billion, full funding of the World Bank's recently agreed capital increase leading to an additional $75 billion of lending, an increase of $6 billion in the structural adjustment facility (SAF) of the IMF and a doubling of its compensatory finance facility. See ibid., p. 55.

70/ See UNDP, Human Development Report 1991, op. cit., p. 80.

71/ See J. Zietz and A. Valdes, "The costs of protectionism to developing countries: an analysis for selected agricultural products", World Bank Staff Working Paper No. 769, Washington, D.C., p. 7.

72/ For further information, see United Nations, World Economic Survey 1991, op. cit., p. 62.

73/ For the correspondence between ODA volume and regional GNP shares, see P. Vitta, "Technology policy in sub-Saharan Africa: why the dream remains unfulfilled", World Development, vol. 18, No. 11, Nov. 1990, p. 1473.

74/ As derived from simulations using UNCTAD's System for Interlinked Global Modelling and Analysis (SIGMA). See United Nations, Overall Socio-economic Perspective of the World Economy to the Year 2000, op. cit., p. 55.

75/ See World Bank, World Development Report 1990: Poverty, op. cit., p. 136.

76/ As derived from the Future of Global Interdependence model (FUGI) of Soka University, Japan. See United Nations, Overall Socio-economic Perspective of the World Economy to the Year 2000, op. cit., pp. 54-55.

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77/ For example, properly targeted funds, by one estimate, could reduce total poverty in developing countries by a factor of more than eight to one compared to economic growth alone. See N. Kakwani, "Poverty and economic growth: with application to Côte d'Ivoire", op. cit., p. 47.

78/ See General Assembly resolution 44/211 of 22 December 1989 entitled "Comprehensive triennial policy review of operational activities for development of the United Nations system".

79/ See UNDP, Human Development Report 1991, op. cit., pp. 8-9.

80/ See UNDP, Human Development Report 1990, op. cit., pp. 5-6.

81/ See F. Stewart, Macro Policies for Appropriate Technology, Westview Press, Boulder, Colorado, 1987.

82/ One-shot vaccines may be developed, for example, where genetic elements drawn from a variety of viruses will be strung along together in one vaccine. See B. Bloom, "Vaccines for the Third World", Nature, vol. 342, 9 Nov. 1989.

83/ See C. Westoff and L. Ochoa, "The demand for family planning; highlights from a comparative analysis", paper presented at the Demographic and Health Surveys World Conference, Washington, D.C., 5-7 August 1991.

84/ See FAO, The Dynamics of Rural Poverty, Rome, 1986, pp. 124-131.

85/ See L. Mureithi and B. Makau, "Biotechnology and farm size in Kenya", WEP Research Working Paper, ILO, Geneva, 1989; and G. Okereke, "Biotechnology to combat malnutrition in Nigeria", WEP Research Working Paper, ILO, Geneva, 1988.

86/ See W. Anderson, "Food without farms", The Futurist, January-February 1990.

87/ See, for example, J. Cook, "Biological pest control", Agricultural Research, March 1989.

88/ See H. Miller and S. Ackerman, "Perspective on food biotechnology", FDA Consumer, March 1990; and ILO, 1991, p. 62.

89/ In fact, the national and international research centres that spearheaded the "green revolution" technologies of the 1950s and 1960s have been largely uninvolved to date in genetic engineering. See UNCTAD, Trade and Development Aspects and Implications of the New and Emerging Technologies: the Case of Biotechnology, Geneva, 1991.

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90/ See C. Juma, The Gene Hunters: Biotechnology and the Scramble for Seeds, Princeton University Press, Princeton, 1989.

91/ See A. Sasson, Biotechnologies and Development, UNESCO, Paris, 1988, pp. 261-262.